

SR 520 Bridge Replacement and HOV Program and Tolling

Paula J. Hammond, P.E.
Secretary

Steve Reinmuth
Chief of Staff

Julie Meredith, P.E.
SR 520 Program Director

Pete Briglia, P.E.
Toll Division Operations Director

Mark Leth, P.E.
Northwest Region Traffic Engineer

Joint Transportation Committee
July 25, 2012

Construction Progress



Presentation Overview

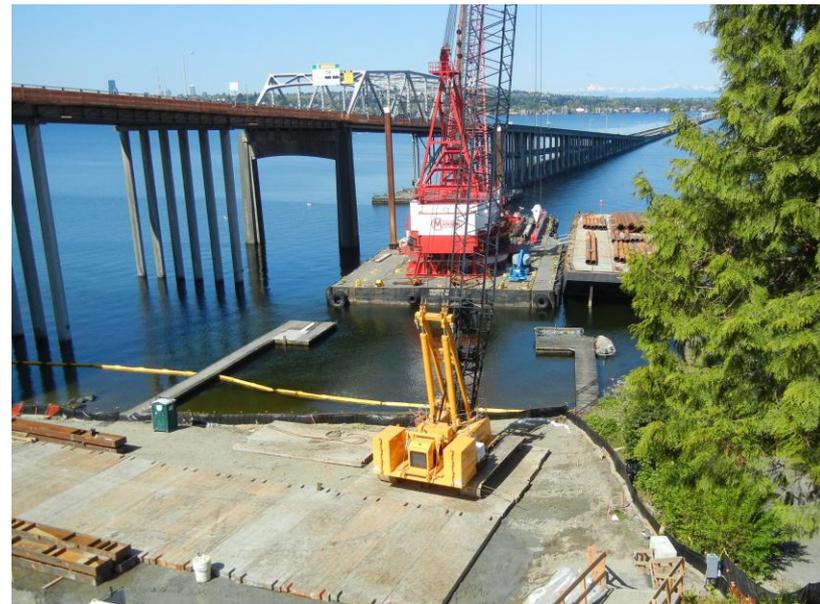
- **SR 520 Program**

- Construction updates:
 - Eastside
 - Floating bridge and landings
 - Pontoons
- West side update
- 2012 / 2013 look ahead



- **SR 520 Tolling**

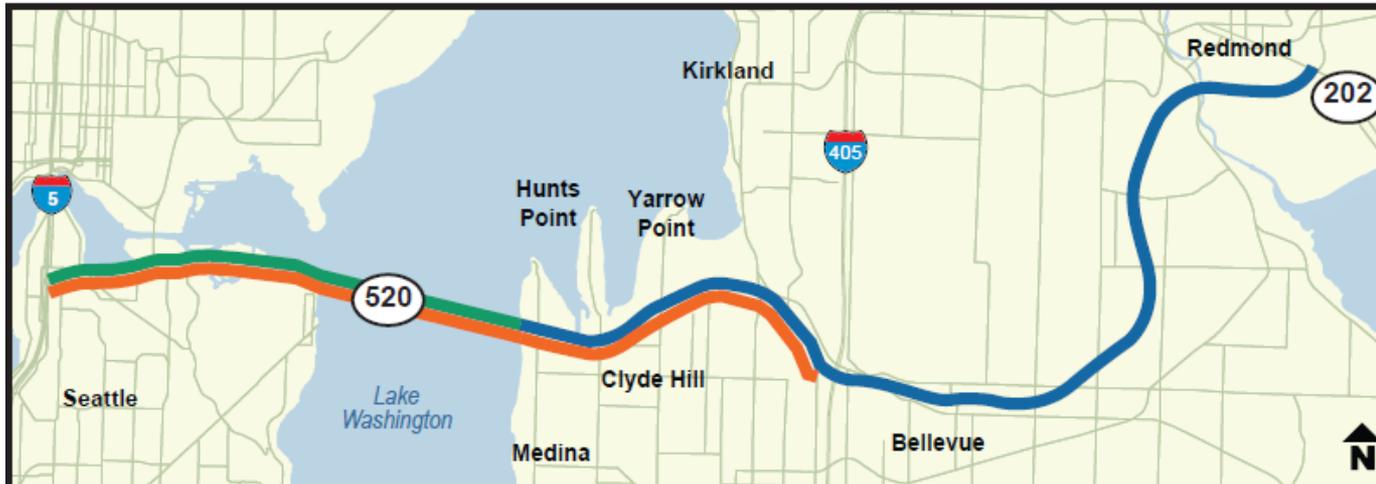
- Overview
- Traffic monitoring



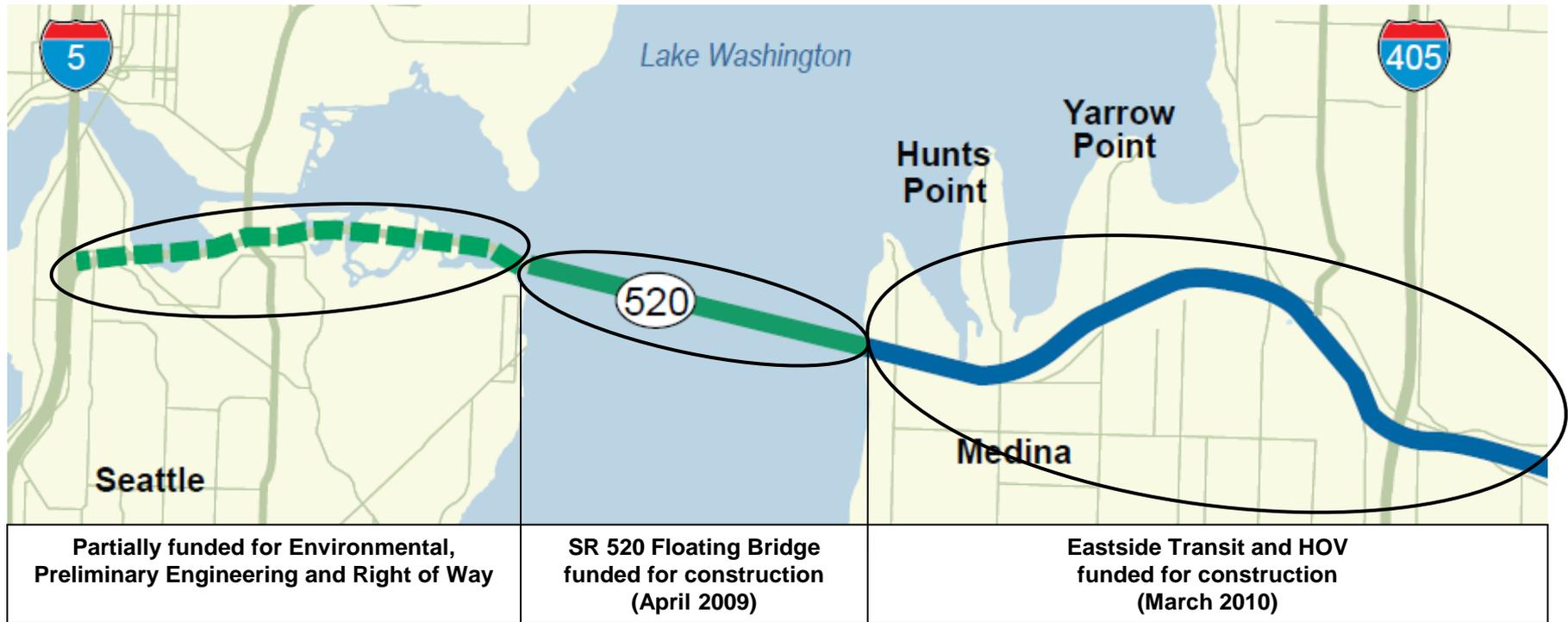
SR 520 Program Description

The SR 520 Bridge Replacement and HOV Program will replace the Portage Bay and Evergreen Point bridges and improve the existing roadway between I-5 in Seattle and SR 202 on the Eastside.

-  **I-5 to Medina: Bridge Replacement and HOV Project** – Replaces the SR 520 floating bridge and landings, and interchanges and roadway between I-5 and the eastern shore of Lake Washington.
-  **Medina to SR 202: Eastside Transit and HOV Project** – Completes and improves the transit and HOV system from Evergreen Point Road in Medina to the SR 202 interchange in Redmond.
-  **Lake Washington Congestion Management Project** – Implements tolls on the existing SR 520 floating bridge, and activates Smarter Highways features from I-5 to I-405.
-  **Pontoon Construction Project** – Advances pontoon construction to restore the floating section of the SR 520 bridge in the event of a catastrophic failure and to store those pontoons until needed.



What is Funded For \$2.43 Billion?



Program cost: \$4.65 billion

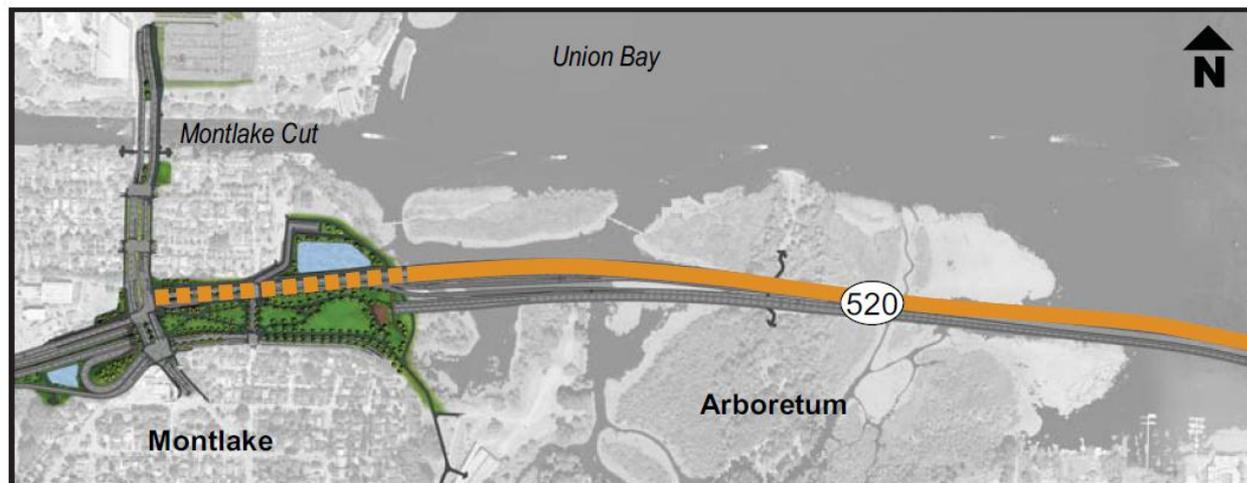
What's funded: \$2.43 billion (includes sales tax deferral)

- Pontoon construction in Grays Harbor.
- The floating bridge and landings.
- Eastside transit and HOV improvements.

Updated Jan. 13, 2012

Continuing Efforts to Fund the I-5 to Medina Project

- Transportation Infrastructure Finance and Innovation Act (TIFIA) loan for West Approach Bridge North.
- I-90 tolling study

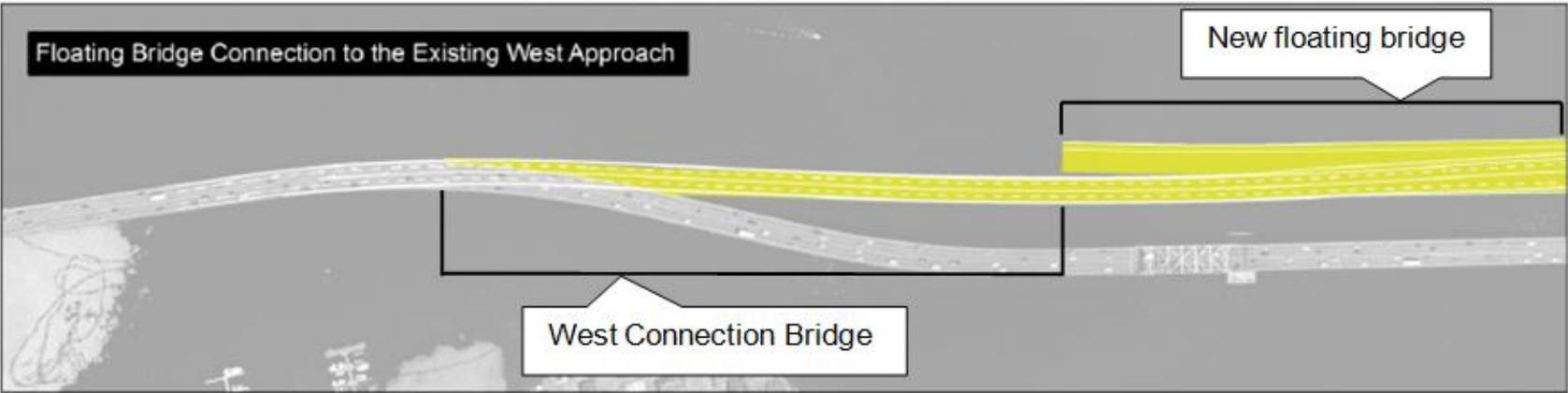
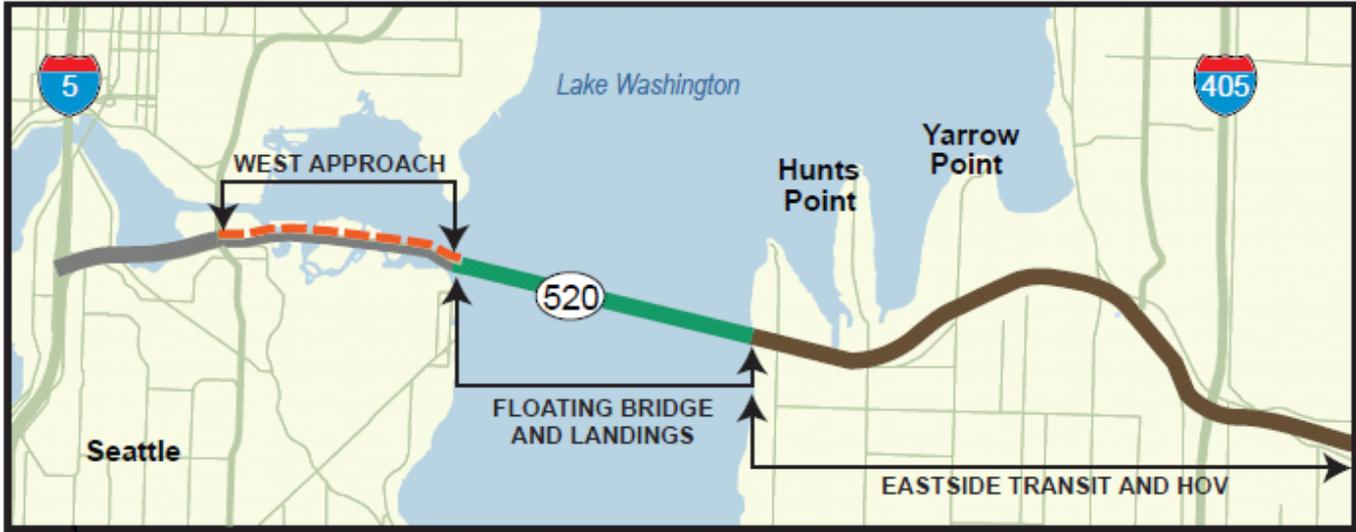


 North half of West Approach bridge would be funded by TIFIA loan.

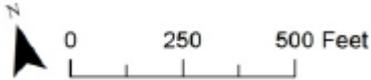
Construction of the south half of the west approach and Montlake lid would be built with additional future funding.

CONCEPTUAL

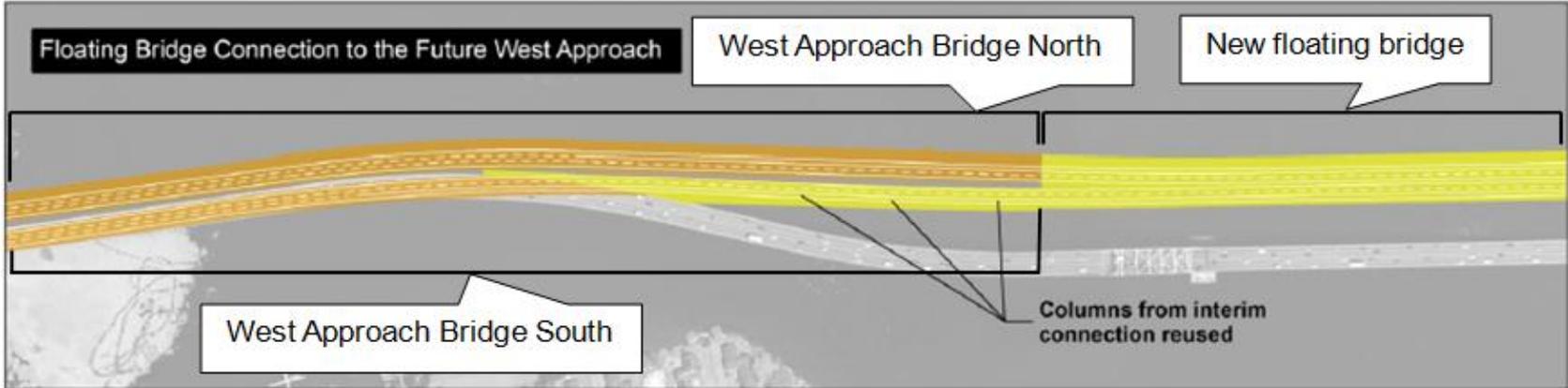
Program Construction Staging – Phase I



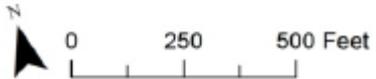
Construction Phase 1



Program Construction Staging – Full Build



- Construction Phase 1
- Full Build



Eastside Transit and HOV Project



Eastside Construction Activities



Crews finished setting girders for the new Evergreen Point Road lidded overpass in June 2012.



Excavators armed with concrete munchers helped crews demolish the old Evergreen Point Road overpass in March 2012.



Crews set more than 200 precast concrete panels for the new lidded overpass at Evergreen Point Road during the July 2012 weekend closure.

Eastside Construction Tour – July 14, 2012



Members of the public tour the east highrise of SR 520.

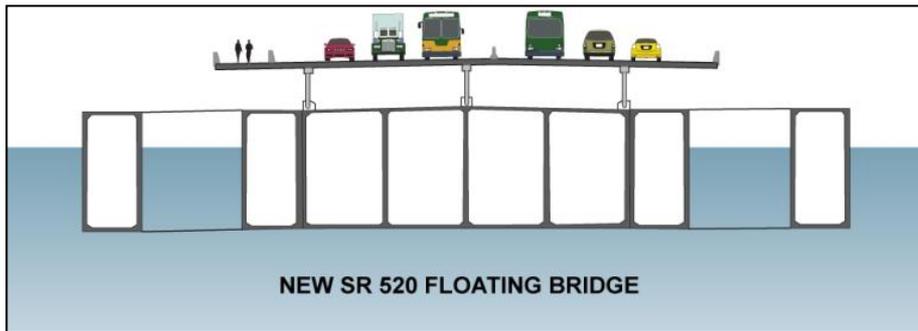


Construction tour participants walk across the closed highway.



WSDOT bridge maintenance crews make repairs and perform crucial safety and performing tests on the aging SR 520 bridge.

I-5 to Medina: Bridge Replacement and HOV Project - Floating Bridge and Landings Phase Overview



Visualization of WSDOT's concept for the new floating bridge, the preferred alternative

Floating Bridge Construction Update

- pontoons are under construction in Aberdeen and Tacoma.
- Precast elements are under construction in Kenmore.
- Construction began on Lake Washington in April.



Tacoma Construction Activities



CTC site at the Port of Tacoma.



Pontoons as viewed from the floor of the casting basin.



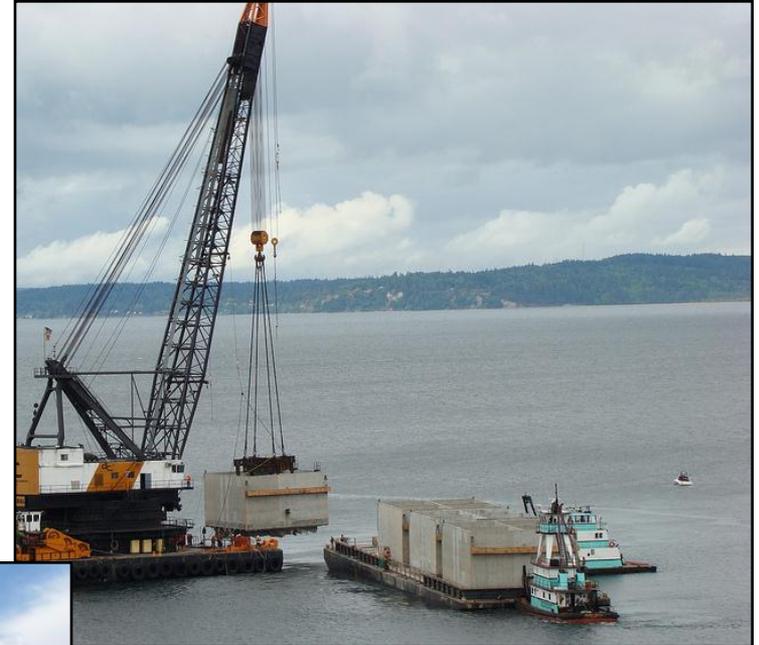
Workers placing concrete for keel slab in pontoon 5B at CTC site.

Kenmore Construction Activities



Workers installing wall forms for gravity anchor in Kenmore.

A derrick crane lifts a completed gravity anchor for towing to Lake Washington.



Fluke anchors weigh approximately 100 tons.

Lake Washington and Medina Construction Activities



Aerial view of construction area in Medina.

View of construction activities in Medina from Lake Washington.

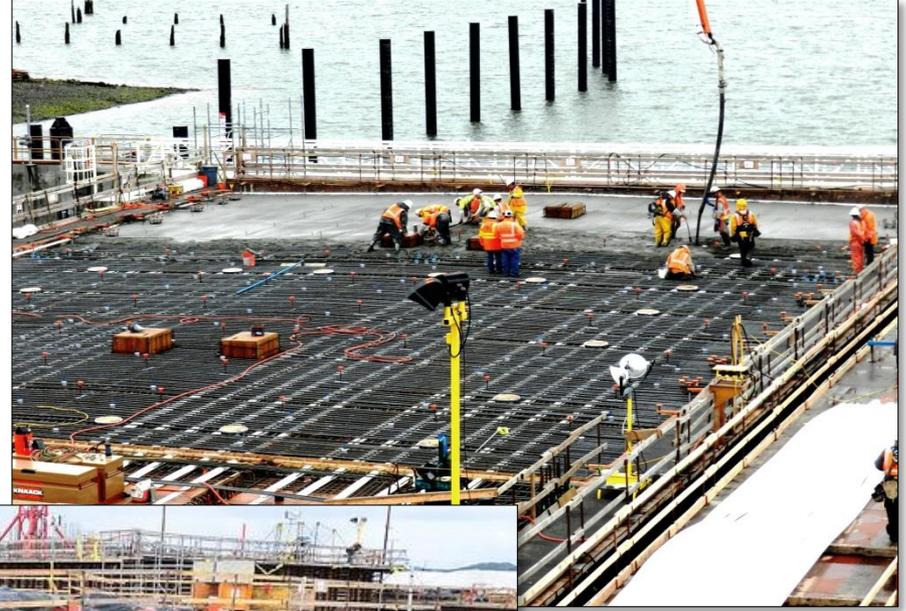


View of upland cofferdam in Medina.

Aberdeen Construction Activities



A welder cuts steel tendons as a final step in the pontoon post-tensioning process.



Crews began work on the first top deck pour of a longitudinal pontoon in April 2012. As of July 2012, all slabs have been poured and work continues on post-tensioning.



An 11,000-ton longitudinal pontoon nears completion in the casting basin.

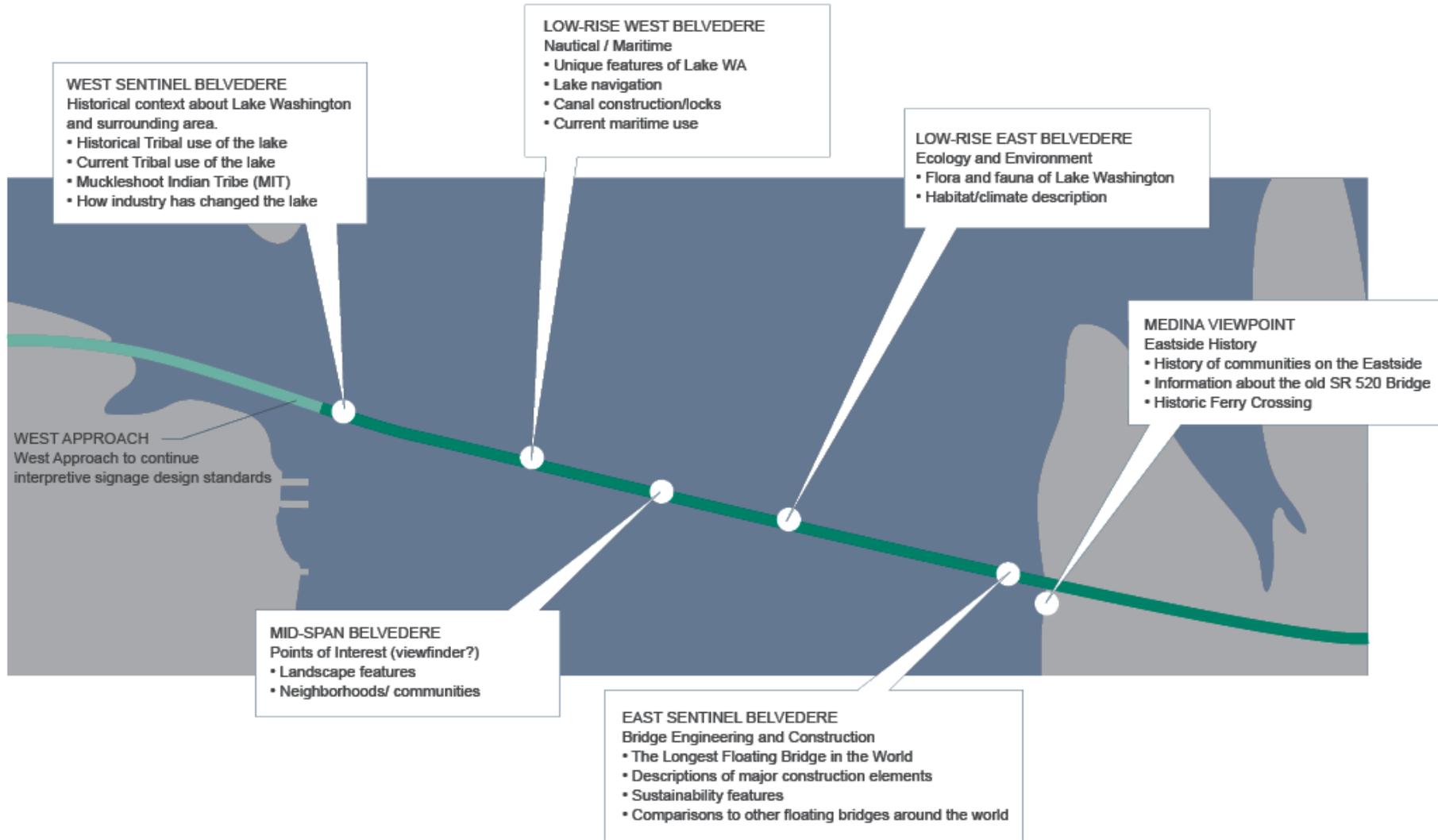
East Approach Structure



View from Laurelhurst



Interpretive Signage



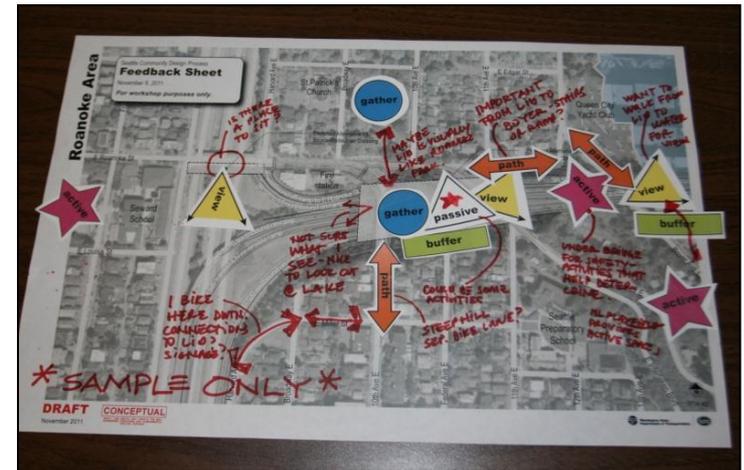
Belvedere User Perspective



Seattle Community Design Process Overview

- We're working with:
 - Our partner agencies including city of Seattle and Seattle Design Commission.
 - West Side Community Design Collaborative.
 - Bridge architecture consultant.
 - General public and SR 520 users.
 - Urban Design and Sustainability Expert Review Panel.

- What we've heard:
 - Specific design comments on lid functions, bridge structures, bike/pedestrian connections, and natural environment restoration.



2012 – 2013 Look Ahead

- Construction activities on the Eastside, pontoons and floating bridge projects.
- Seattle Community Design Process.
- Continue to seek funding for full I-5 to floating bridge construction.



Participants at public session, October 2011



Cofferdam construction in Medina.

SR 520 Bridge Tolling Travel Performance Update

Lake Washington Congestion Management Program



\$154.5 million federal grant to improve congestion in the SR 520 corridor:

- Variable tolling on the SR 520 bridge
- Electronic travel time signs on I-405, SR 520 and SR 522 direct drivers to the best route across Lake Washington
- Smarter Highways on SR 520 and I-90 provide drivers with variable speed limits and real-time driver information
- King County and Sound Transit added more than 130 daily bus trips across the SR 520 bridge
- Vanpool and carpool programs encourage people to commute together

Coordinating Monitoring with Local Jurisdictions

Invited local jurisdictions along corridors potentially affected by tolling:

- Bellevue
- Bothell
- Clyde Hill
- Hunts Point
- Kenmore
- King County
- King County Metro
- Kirkland
- Lake Forest Park
- Medina
- Mercer Island
- Redmond
- Renton
- Seattle
- Woodinville
- Yarrow Point



Urban Partnership Agreement Evaluation

FHWA, as part of the Urban Partnership Agreement, is conducting a wide-ranging comprehensive evaluation of:

- Utilization of tolling, transit, telecommuting and technology (4Ts)
- Effectiveness of 4Ts as traffic congestion reduction mechanisms
- Changes in travel behavior (modes, routes, times, origins and destinations, etc.) and the reasons for those changes.
- Differences of impacts and differences in utilization and perception associated with various subpopulations.

We expect results from this effort in 2013.

WSDOT Traffic Monitoring

WSDOT's monitoring effort includes:

- 522 travel times
- Signal coordination
- SR 522 data collection (WSDOT)
- Freeway and ramp data collection (WSDOT)
- Local roadway data collection (local jurisdictions)
- Local roadway data collection (WSDOT)
- Travel time monitoring on freeways
- Data sharing



Traffic Monitoring Locations

State Highways

- SR 522: 18
- Other state highways: 16

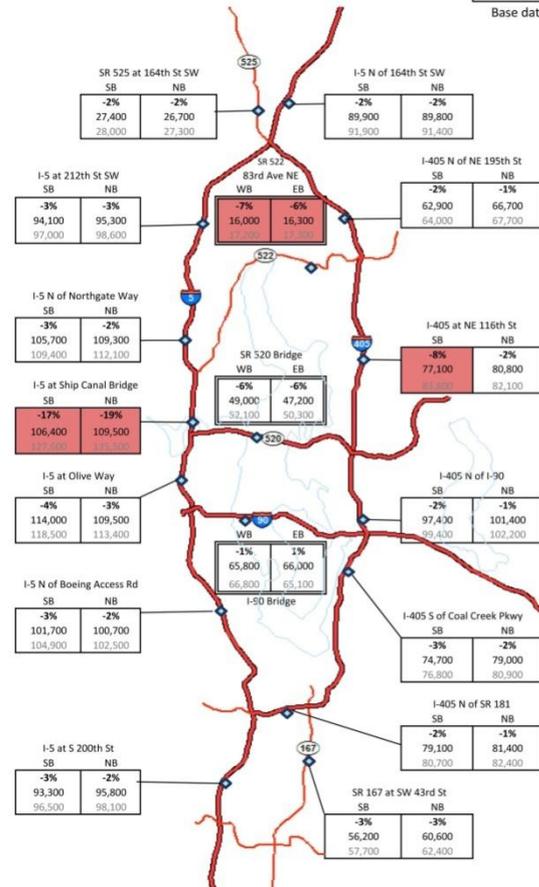
City Streets

- Bothell: 3
- Kenmore: 9
- Kirkland: 5
- Redmond: 6
- Woodinville: 2

SR 520 Tolling: Traffic Monitoring
Daily Mainline Volumes
 Monday, April 18, 2011

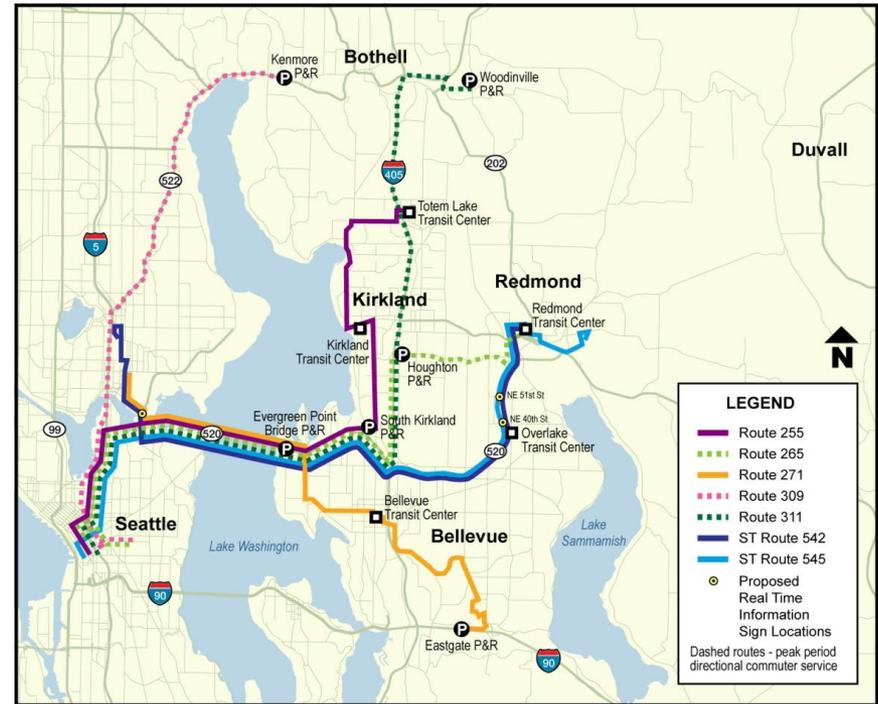
| % change 4/18/2011 median | above range of typical variation (10-90%ile) | below range of typical variation (10-90%ile) |
|---------------------------------|---|---|
| | | |

Base data: M-F, March 7 - April 15, 2011



Transit and Vanpool Update

- Increased SR 520 bus service more than 20 percent
 - 15 percent increase due to service investment
 - 10 percent ridership increase since tolling started
- Vanpools in the SR 520 corridor have increased 18 percent
- Park and ride usage is similar to pre-tolling with most lots remaining full
- Improved travel times on SR 520 means improved on-time performance



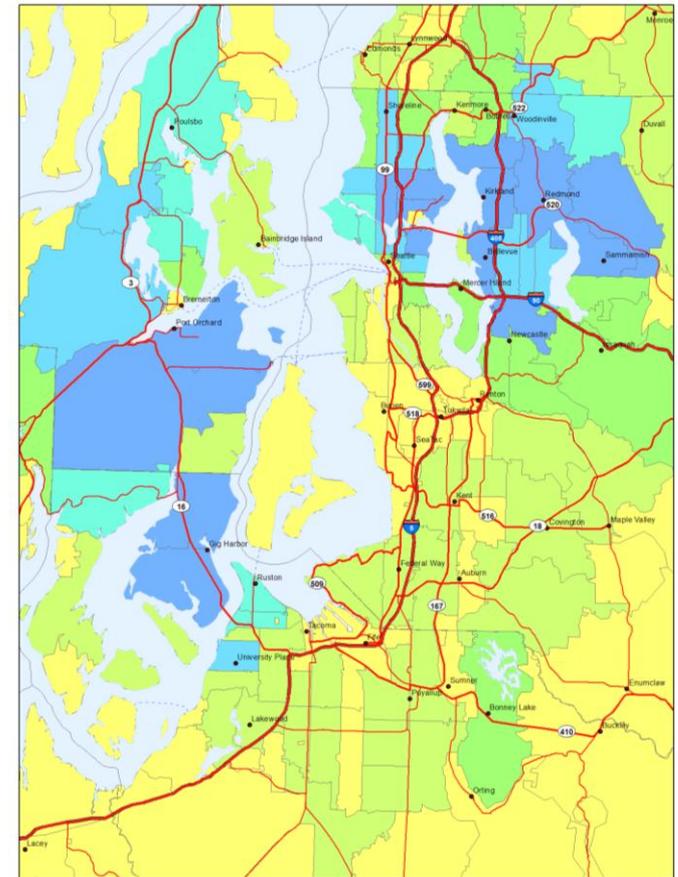
Early Indicators of Toll Success



- *Good To Go!* accounts
 - Goal: 100,000 new accounts by opening
 - June: 280,687 new accounts opened since February 2011
- Trips paid via *Good To Go!* accounts
 - Forecast: 72 percent of transactions during the first year paid via *Good To Go!* accounts (pass or Pay By Plate)
 - June: 81 percent of transactions were paid with a *Good To Go!* account (69.7 percent pass, 11.3 percent Pay By Plate)

Good To Go! Accounts by Zip Code

- Number of *Good To Go!* accounts grows as we open new facilities
- Different markets for each facility
- Growth in Seattle and the Eastside for SR 520 tolling



Data Source - WSDOT Customer Service Center
Address Priority - Contact, Shipping, Billing
6.1.2012

Good To Go!™ Accounts
per Zip Code 6.1.2012



Future of Tolling I-90

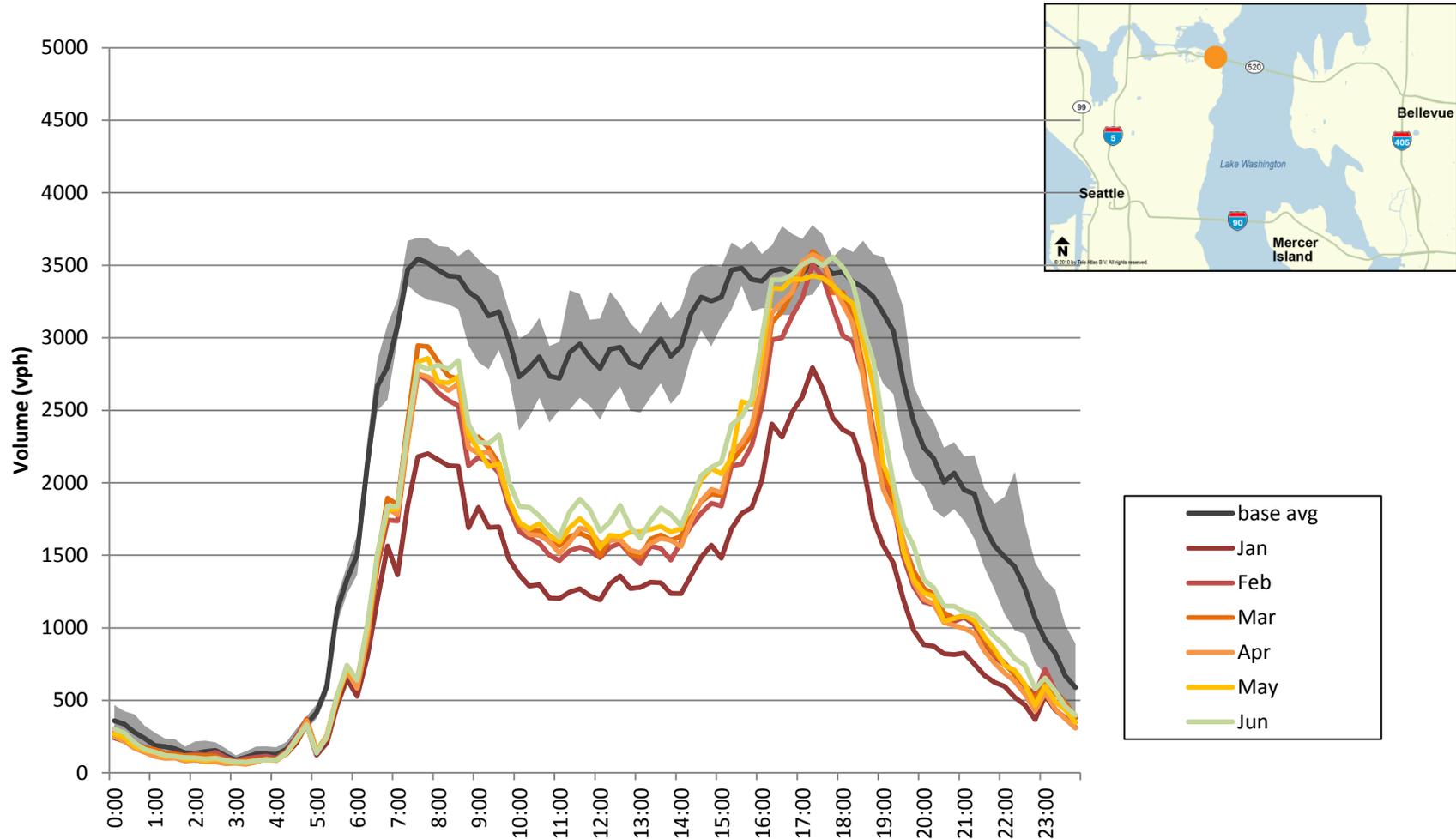
- No authorization currently for tolling I-90
- State Legislature will make the decision if I-90 will be tolled
- WSDOT and legislators are monitoring the following:
 - Traffic diversion on I-90 and other affected corridors
 - Amount of revenue generated by tolling just SR 520



Initial Traffic Results – June 2012

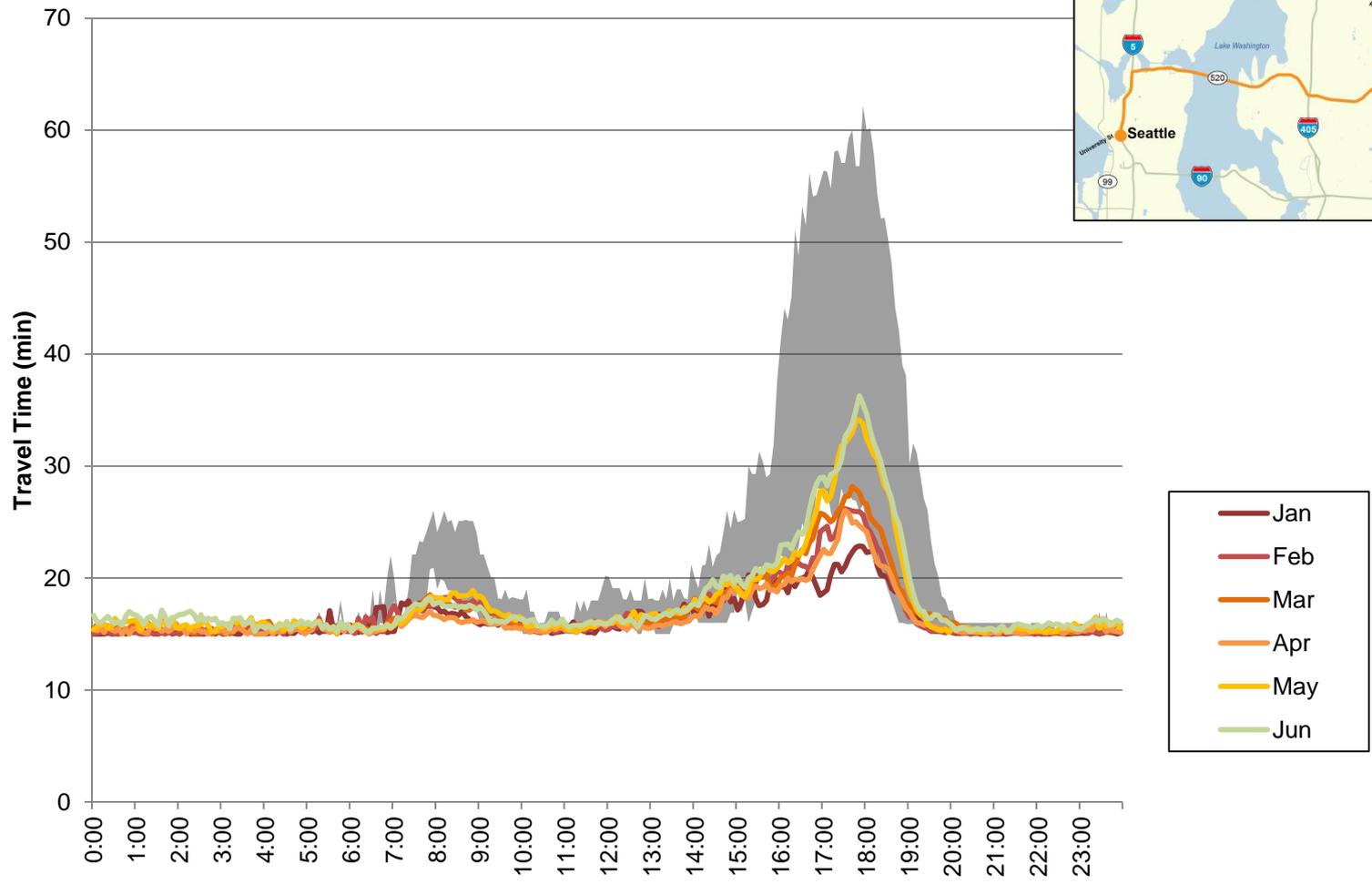
- SR 520
 - Toll daily volume is generally at or above projected levels
 - Travel times are 5-10 minutes shorter on average during the peaks
- I-90
 - Daily volume is 15 percent higher
 - I-90 travel times are 2-3 minutes longer on average during the peaks
- SR 522
 - Daily volume is 10 to 15 percent higher
 - Travel times have not increased during the peaks
- I-5
 - Daily volume is 3 percent higher in the downtown Seattle vicinity
 - Travel times between Seattle and Northgate are 2-3 minutes slower in both directions
- I-405
 - Daily volume is 8 percent higher in the vicinity between downtown Bellevue & I-90
 - Travel times through Bellevue are 2-3 minutes slower in both directions

Traffic Volume: Westbound SR 520



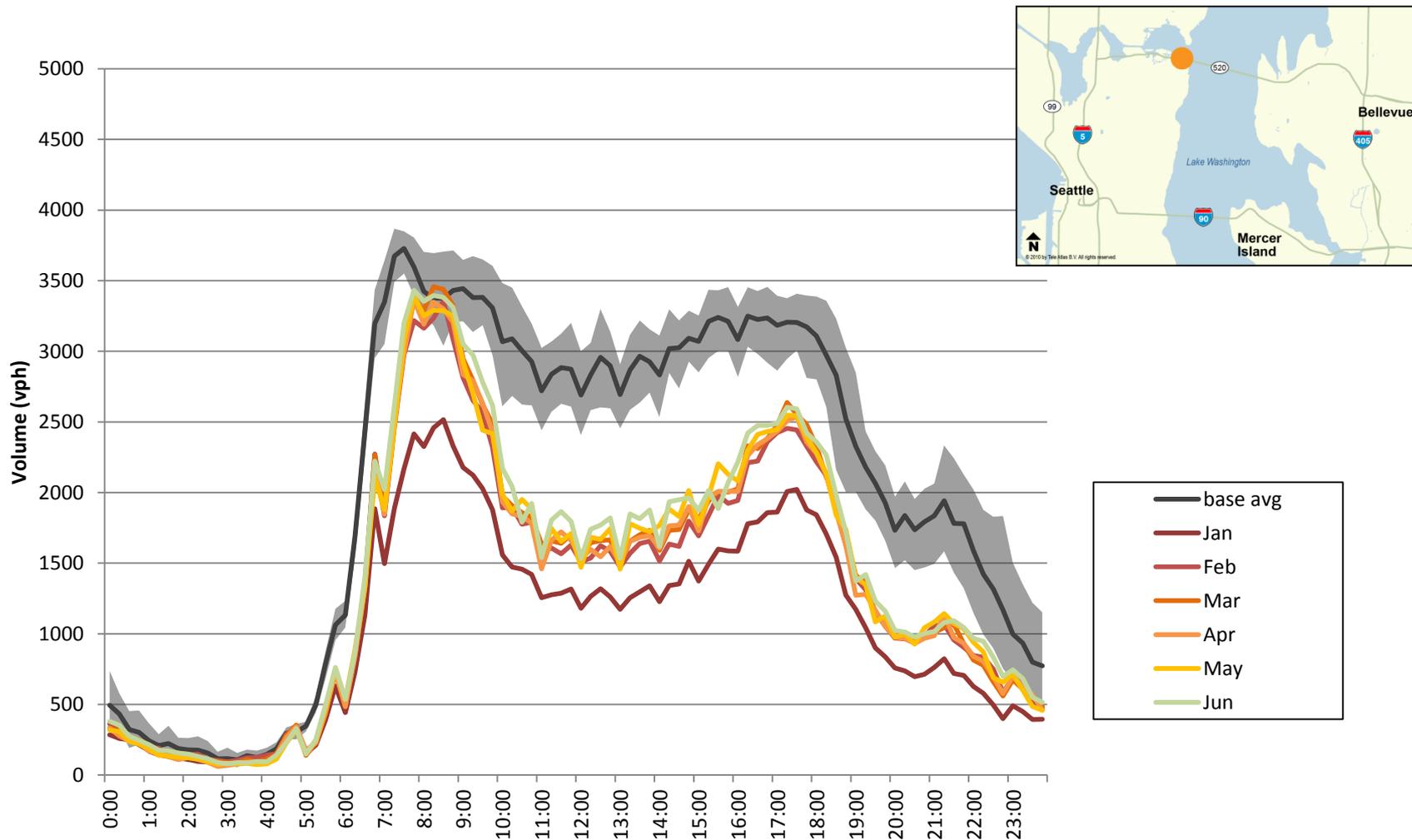
Pre-tolling average is for weekdays Oct. 29-Nov. 18, 2011 and Nov. 26-Dec. 16, 2011
 Post-tolling average is for weekdays Jan. 1-June 30, 2012

Travel time: Redmond to Seattle via SR 520



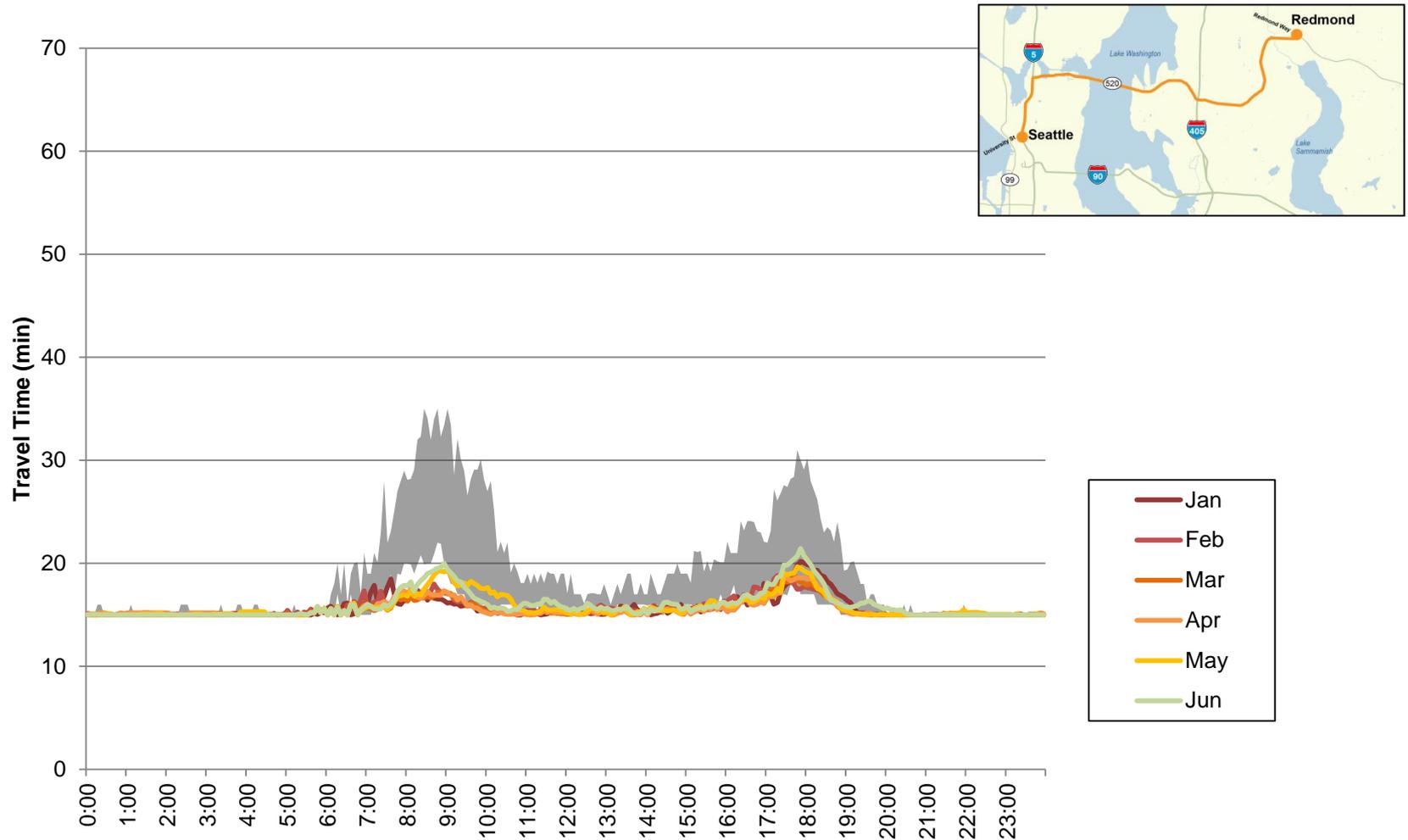
Pre-tolling average is for weekdays Oct. 29-Nov. 18, 2011 and Nov. 26-Dec.16, 2011
Post-tolling average is for weekdays Jan. 1-June 30, 2012

Traffic Volume: Eastbound SR 520



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 Post-tolling average is for weekdays Jan. 1-June 30, 2012

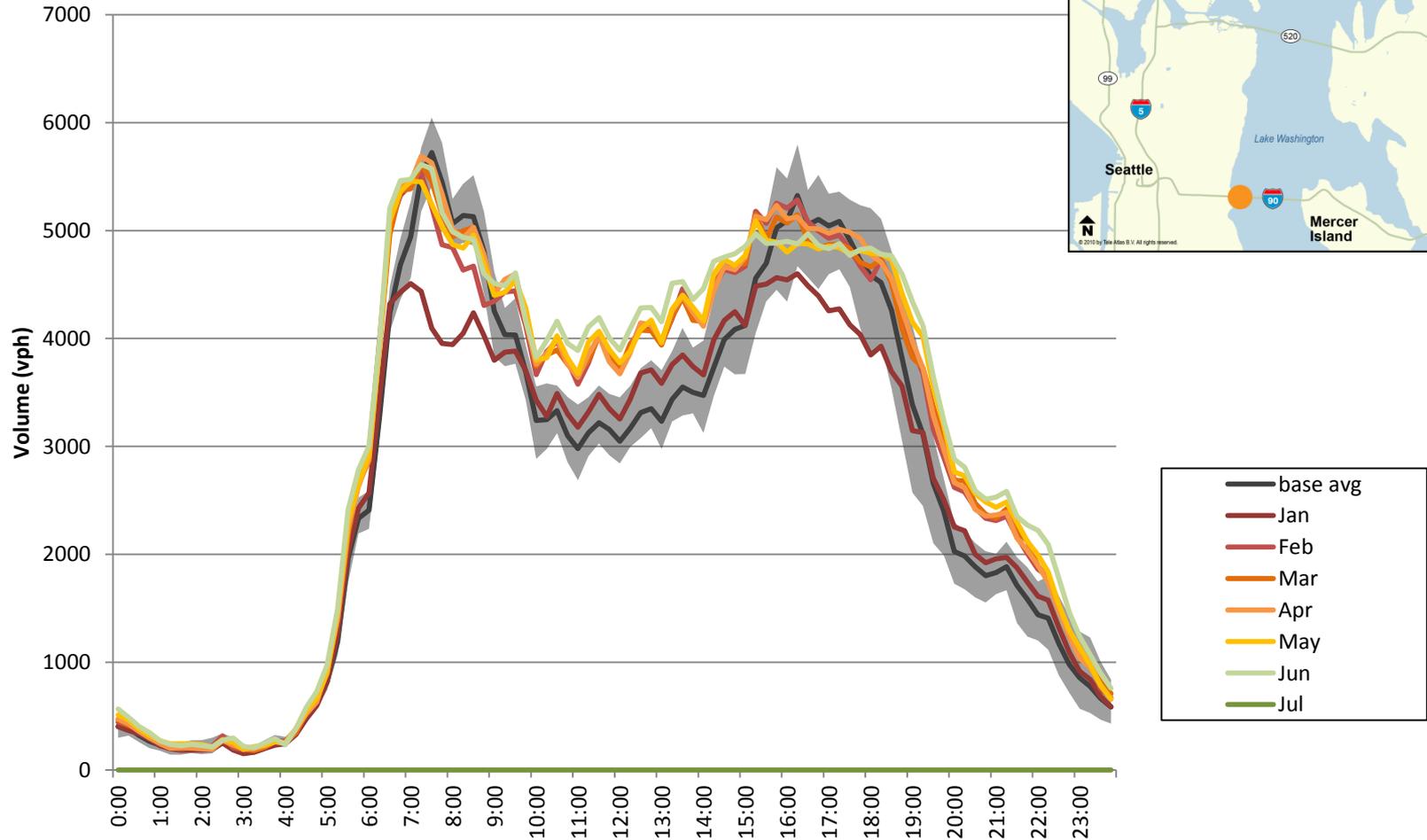
Travel Time: Seattle to Redmond via SR 520



Pre-tolling average is for weekdays Oct. 29-Nov. 18, 2011 and Nov. 26-Dec. 16, 2011

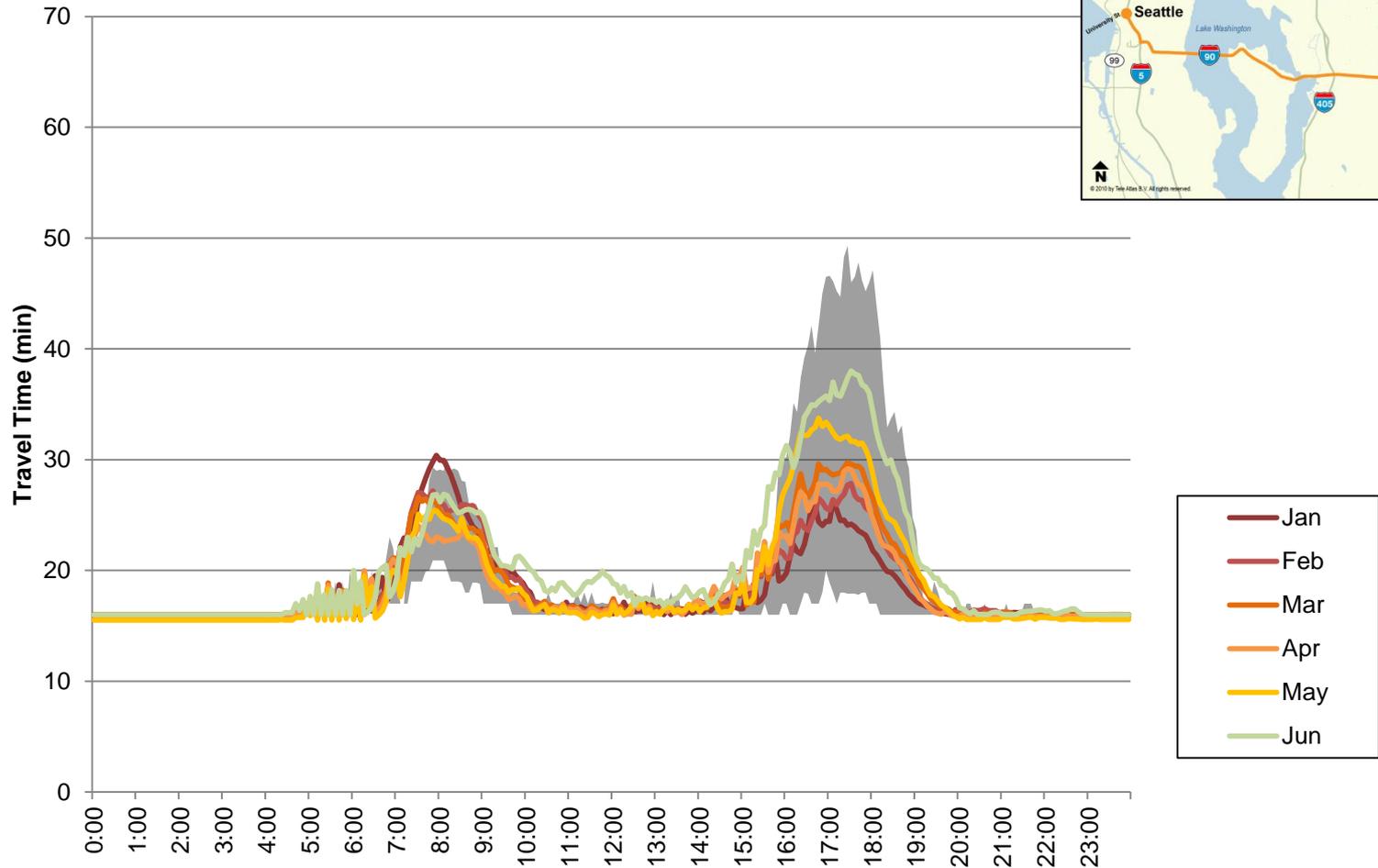
Post-tolling average is for weekdays Jan. 1-June 30, 2012

Traffic Volume: Westbound I-90



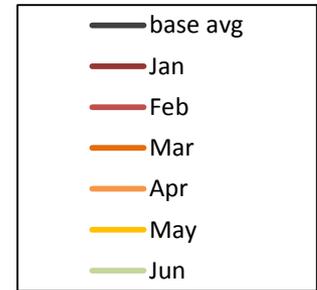
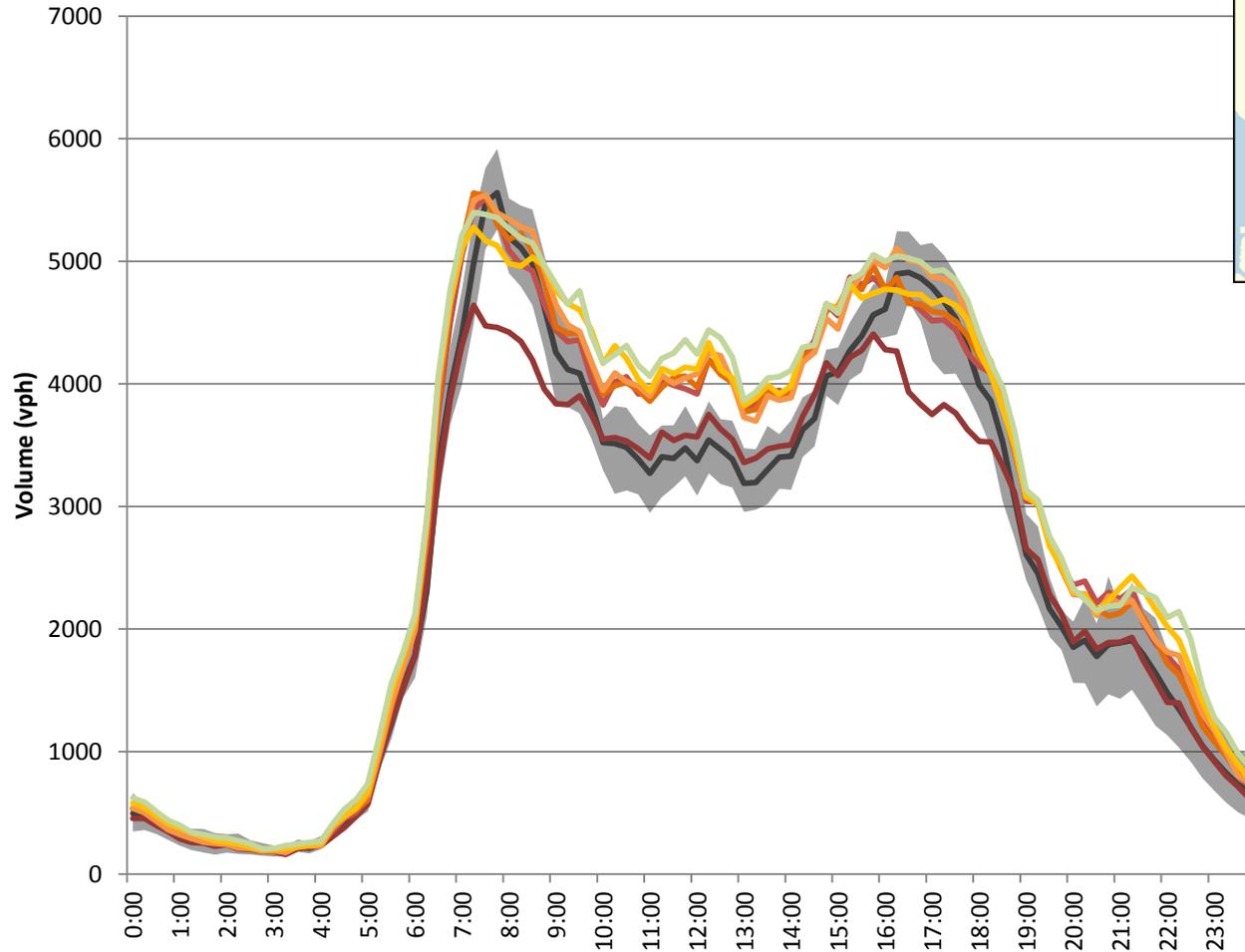
Pre-tolling average is for weekdays Oct. 29-Nov. 18, 2011 and Nov. 26-Dec. 16, 2011
 Post-tolling average is for weekdays Jan. 1-June 30, 2012

Travel Time: Issaquah to Seattle via I-90



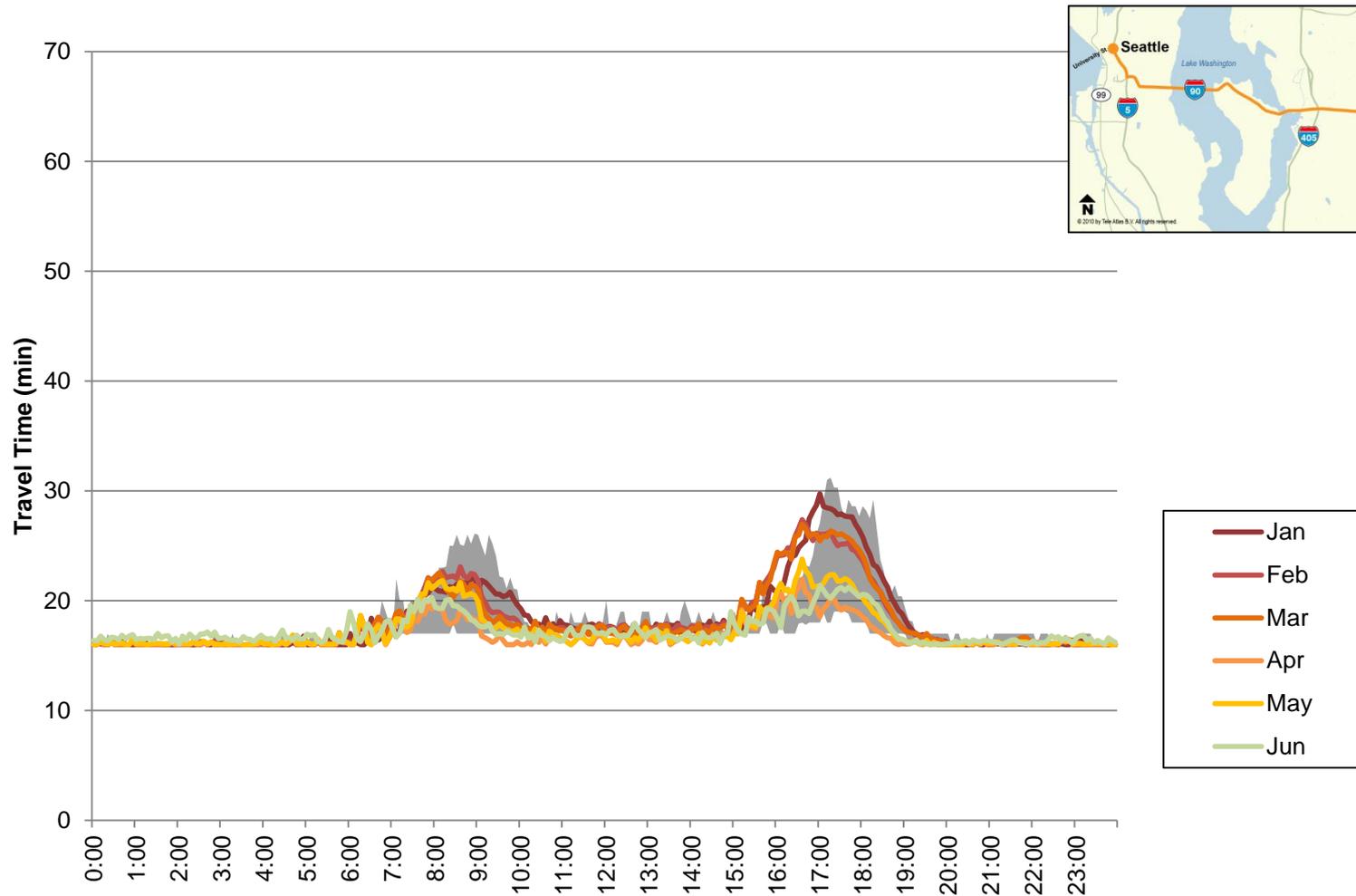
Pre-tolling average is for weekdays Oct. 29-Nov. 18, 2011 and Nov. 26-Dec. 16, 2011
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Traffic Volume: Eastbound I-90



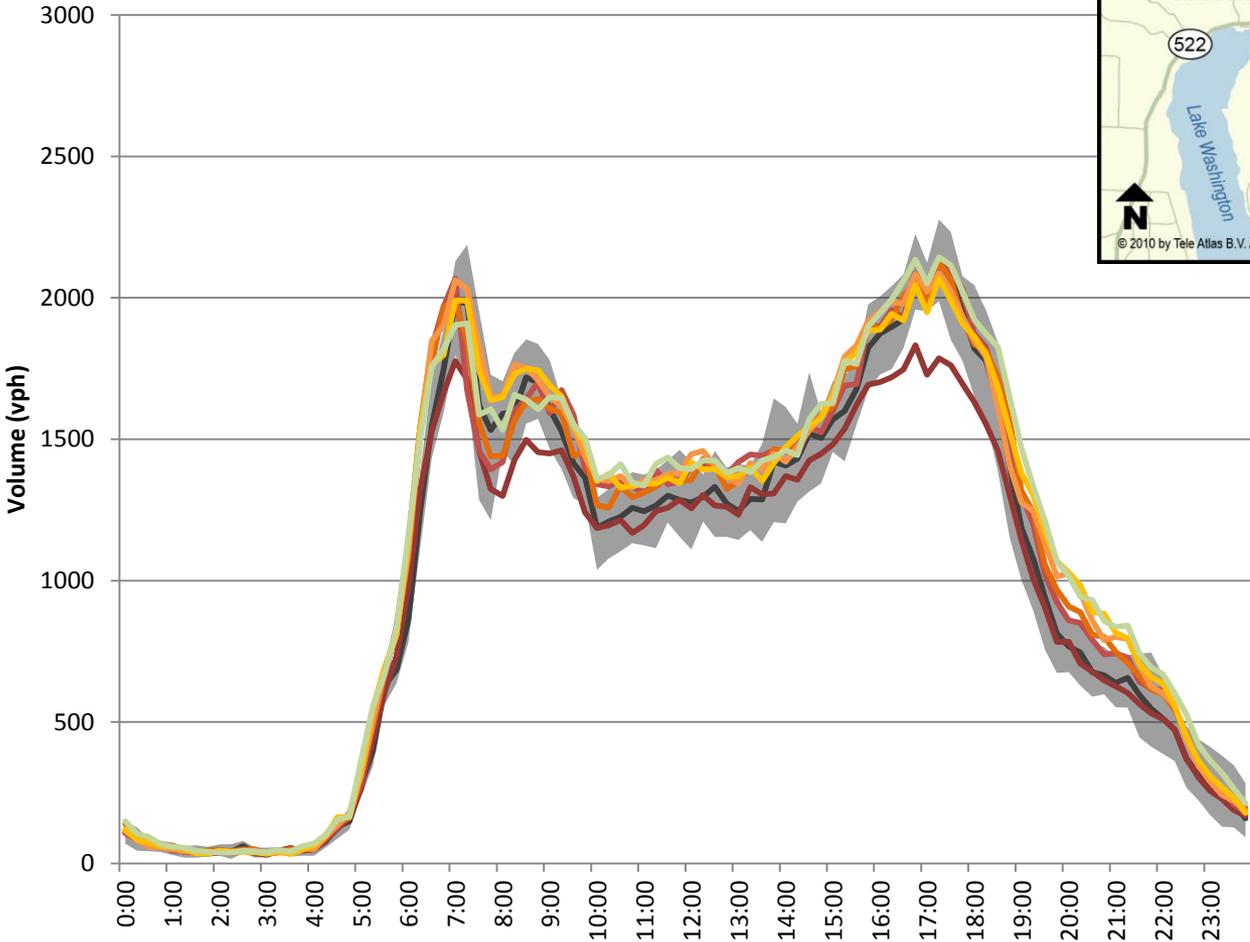
Pre-tolling average is for weekdays Oct. 29-Nov. 18, 2011 and Nov. 26-Dec. 16, 2011
 Post-tolling average is for weekdays Jan. 1-June 30, 2012

Travel Time: Seattle to Issaquah via I-90



Pre-tolling average is for weekdays Oct. 29-Nov. 18, 2011 and Nov. 26-Dec. 16, 2011
Post-tolling average is for weekdays Jan. 1-June 30, 2012

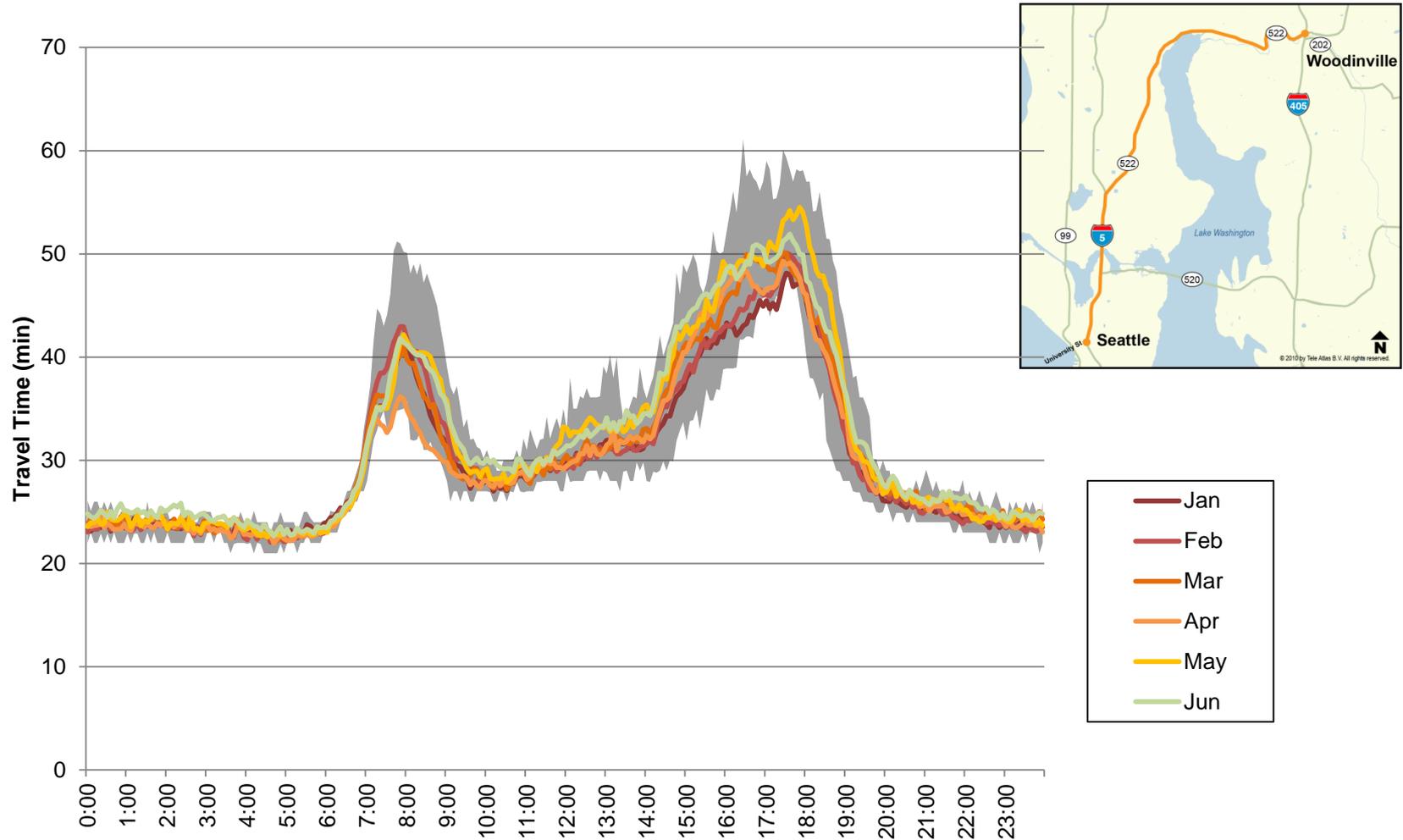
Traffic Volume: Westbound SR 522



- base avg
- Jan
- Feb
- Mar
- Apr
- May
- Jun

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 Post-tolling average is for weekdays Jan. 1-June 30, 2012

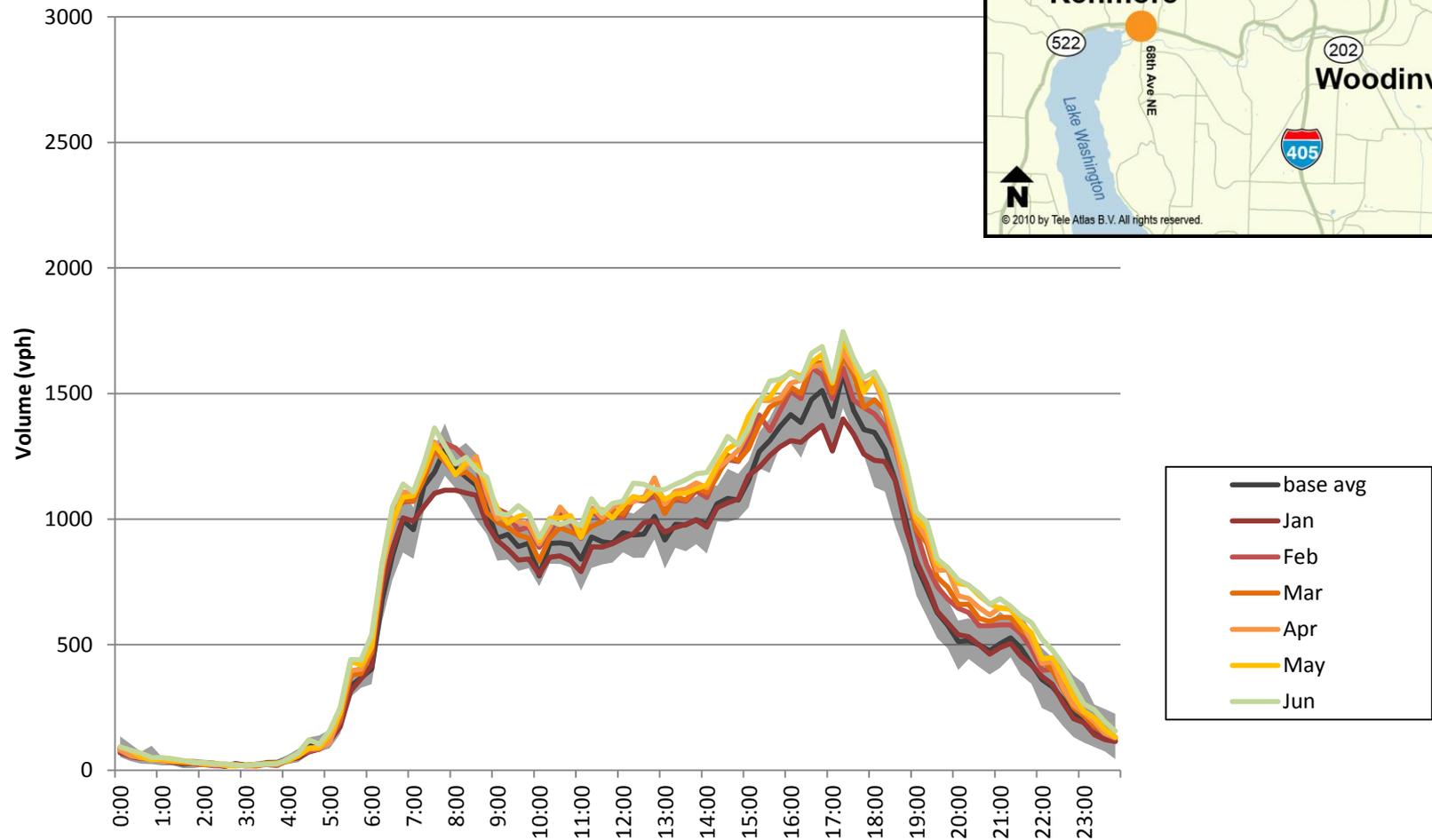
Travel Time: Woodinville to Seattle via SR 522



Pre-tolling average is for weekdays Oct. 29-Nov. 18, 2011 and Nov. 26-Dec. 16, 2011

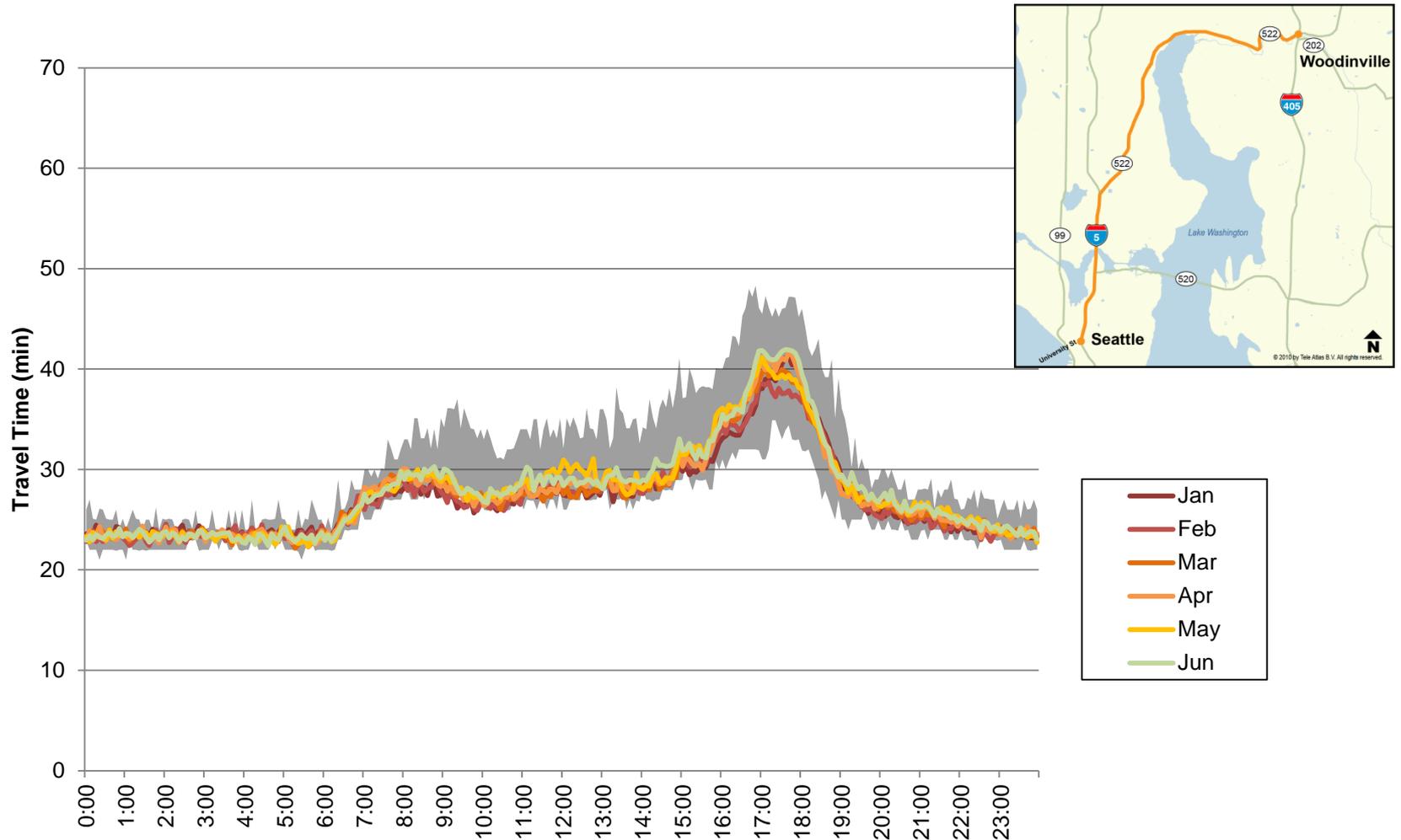
Post-tolling average is for weekdays Jan. 1-June 30, 2012

Traffic Volume: Eastbound SR 522



Pre-tolling average is for weekdays Oct. 29-Nov. 18, 2011 and Nov. 26-Dec. 16, 2011
 Post-tolling average is for weekdays Jan. 1-June 30, 2012

Travel Time: Seattle to Woodinville via SR 522



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Post-tolling average is for weekdays Jan. 1-June 30, 2012

Questions?

Visit: SR 520 Program: www.wsdot.wa.gov/projects/SR520Bridge
Toll Division: www.wsdot.gov/goodtogo

E-mail: SR 520 Program: SR520Bridge@wsdot.wa.gov or
meredjl@wsdot.wa.gov
Toll Division: StoneC@wsdot.wa.gov

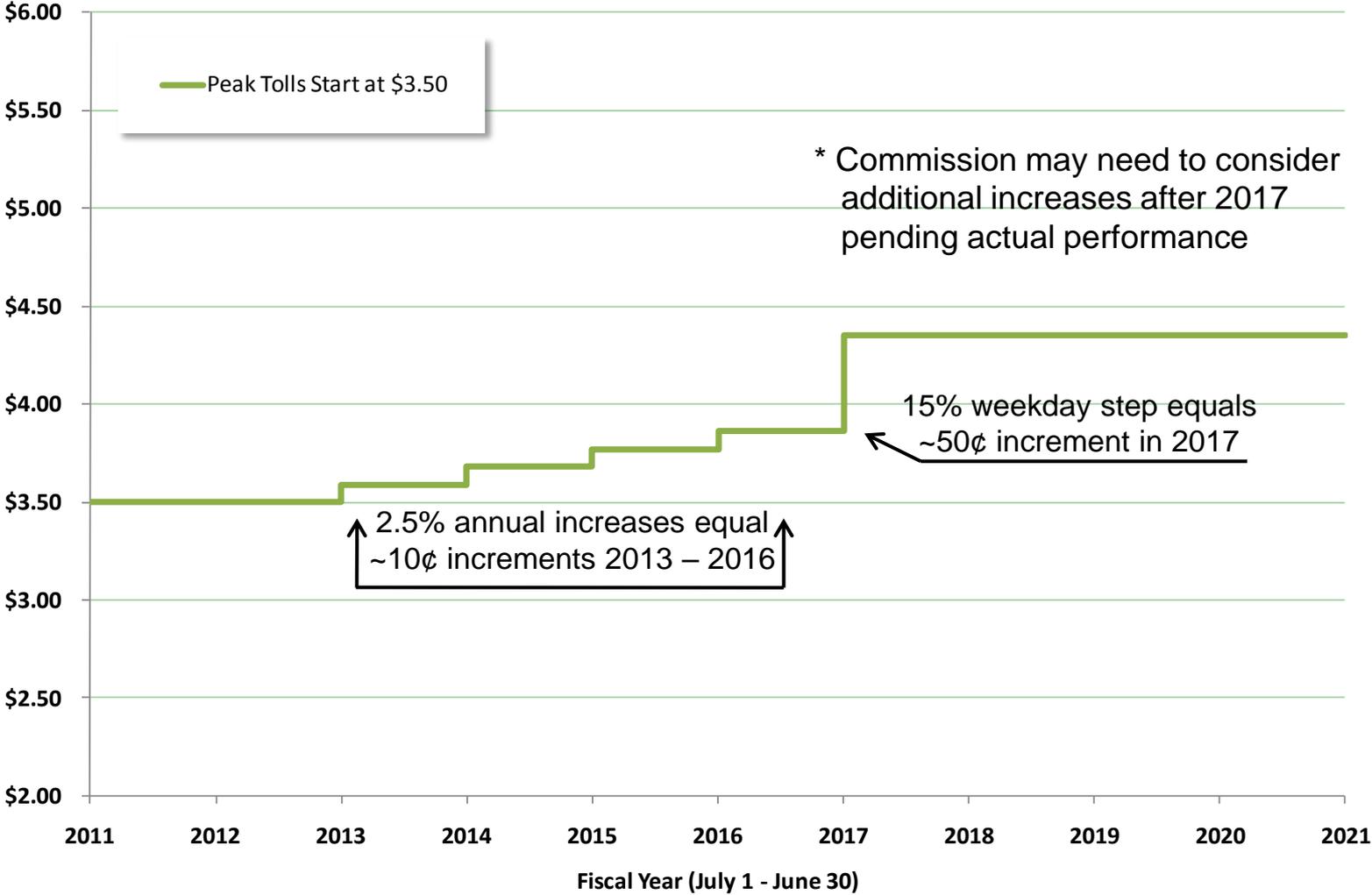
Call: SR 520 Program: 1-888-520-NEWS (6397) or
Julie Meredith (206) 770-3568
Toll Division: Craig Stone (206) 464-1222

Mail: SR 520 Program: Washington State Department of Transportation
SR 520 Bridge Replacement and HOV Program
999 3rd Avenue, Suite 900
Seattle, WA 98104

Toll Division: Washington State Department of Transportation
Toll Division
401 2nd Avenue South, Suite 300
Seattle, WA 98104

Extra Slides

Assumed Peak Period Toll Rates Over Time



Note: All toll rates expressed in year of occurrence dollars (i.e., FY 2017 toll rates are 2016 dollars and would start July 1, 2016)